

THE FINNISH CADASTRE: FULLY DIGITAL WITH FULL COVERAGE, AND AN INTEROPERABLE PART OF THE BASE REGISTER SYSTEM - BUT IS THAT ENOUGH?

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- Short history
- Current discussion
- Steps towards future

QUICK FACTS ABOUT FINLAND



5.5 million
inhabitants



15.8
inhabitants per km²



2.7 million
real estate units



2.6 million
buildings and
dwellings



0.6 million
enterprises
and corporations



3.7 million
vehicles

SHORT HISTORY

- Roots in the Swedish system
- Own Finnish authority 1812
- Independence 1917
- NLS (11) and municipalities (75) updated their manual Cadastres
→ 86 primary + national LIS as copy
- Land Register in local courts
- 2005 official nation-wide single Cadastre within LIS
 - NLS maintain
 - NLS and municipalities update
 - Fully digital with full coverage
- Land Register to NLS 2010

DAWN OF CADASTRAL DIGITALIZATION

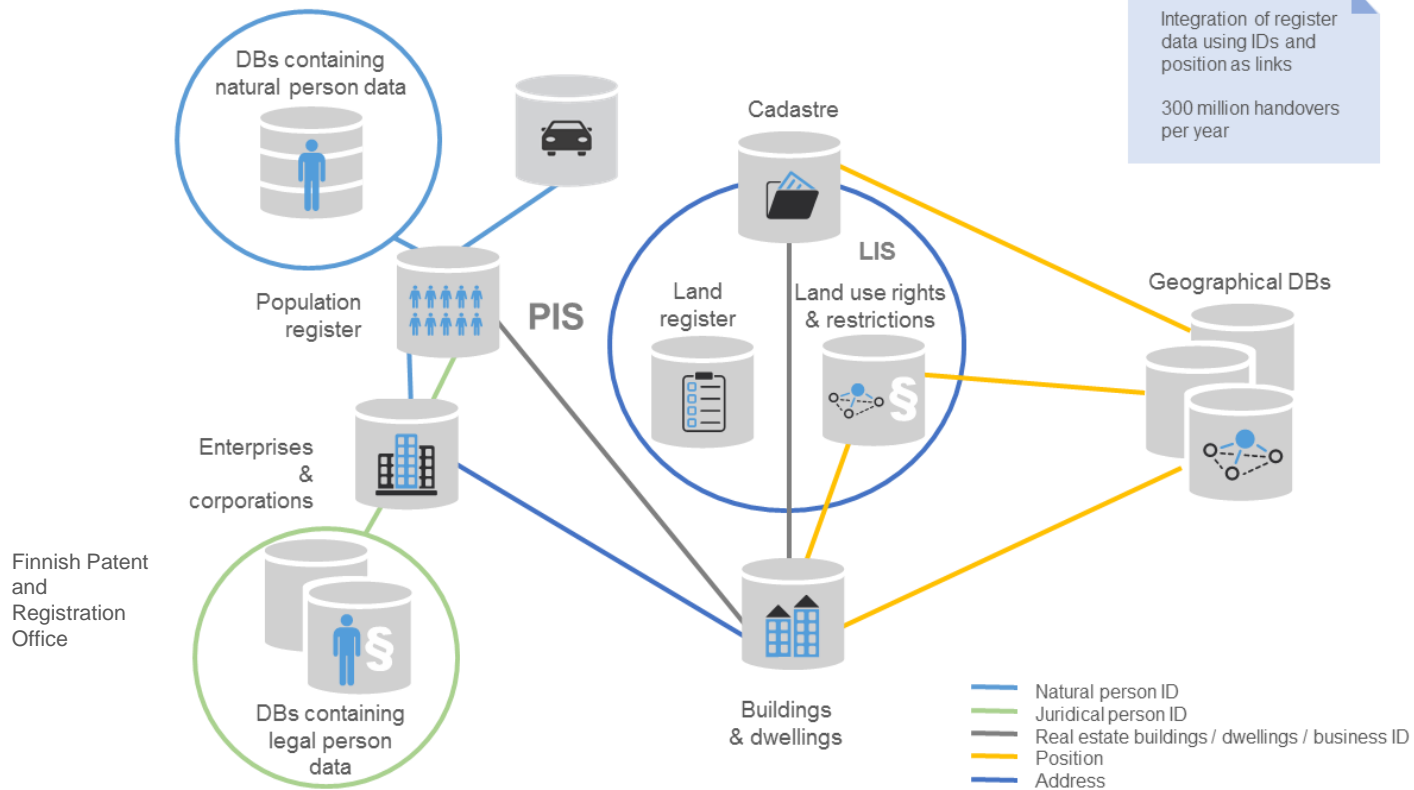
- Computerized data processing used first time in a cadastral survey in 1958 (land consolidation).
- Computer-based register was introduced in 1970

CADASTRE OF TODAY

- Real Estate Formation Act in 1995 came into force 1997
- Same law for urban and rural areas
 - Earlier partly different rules
- Better opportunities to use computerized data processing
- New production system JakoKII rolled out 1998
- New Land Information System in 2005 →
- One nationwide Cadastre and cadastral index map

BASE REGISTER SYSTEM

Integration of register data using IDs and position as links
300 million handovers per year



Finnish Patent and Registration Office

CONTENT OF THE CADASTRE

- Property division
- Incl. shares in common areas
- Connected rights
- Easements, usufructs
- Cadastral index map
- Register units, their identifiers and boundaries

- The State is obliged to pay compensation for errors that are a consequence of decisions taken in cadastral surveys since 1 July 1985.

REAL PROPERTY REGISTERS

- Cadastre
 - NLS and 75 municipalities update
 - NLS, maintain
- Land Register
 - NLS, update and maintain
 - Register on titles and mortgages and special rights
- Purchase Price Register
 - NLS, updating and maintenance

CURRENT ISSUES (1)

Our legacy

- Complexity, time layers → varying specifications and data content → data quality improvement projects since decades
- What data are relevant for today's users?
- What type of Cadastre do we need in the first place?

CURRENT ISSUES (2)

Our reality

- Ongoing change towards digital society overall
- Customer needs and demand force towards service orientation
- Use of (register) data increases and diversifies
- Modern positioning, open data → accuracy of boundary data an issue
 - E.g. land owners, forest harvesters, infrastructure construction projects...
- Is coordinate cadastre a solution? If so, to what problem? What if you just improved the positional accuracy?

CURRENT ISSUES (3)

Technology

- Improving internal efficiency
 - Introduction of automated production processes
 - Introduction of automated decision making – Land Registry
 - Not yet AI, legislative and ethical issues
- What quality is good enough for the variety of purposes?
- Do new technologies like Blockchain play a role?
- Crowdsourcing, positioning, sensor data

CURRENT ISSUES (4)

Institutions and organization

- Platforms, ecosystems and networks to meet customer needs
 - Interlinked and interoperable registers and databases
 - One-stop-shopping
 - Data quality an essential enabler
 - Appropriate steering and funding mechanisms

STEPS TOWARDS OUR FUTURE

- Katasteri2035 project
 - Research study at Aalto University, funded by NLS and MAF
 - Aim to provide research-based views and scenarios
 - Ideas and insight for decision making
- Internal NLS discussion and studies on the subject
 - Customer and service based orientation
 - Activities, organization, and management system revisited
 - Enterprise architecture approach
- 3D real properties since Aug 1, 2018 → fundamental change
- ASREK project: housing companies and shareholders

THE CHALLENGE

- Legacy
- Change
- Demands and aspirations

SHOWING THE WAY

